INTEGRATION OF GROUNDWATER MANAGEMENT

into Transboundary Basin Organizations in Africa

TRAINING MANUAL

Imprint

A4A – aqua for all
AGW-Net – Africa Groundwater Network
ANBO – African Network of Basin Organisations
BGR – Federal institute for geosciences and natural resources
UNDP-Cap-Net
BMZ – Federal Ministry for Economic Cooperation and Development
GWP – Global Water Partnership
IGRAC – International Groundwater Resources Assessment Centre
imawesa – Improved Management of Agricultural Water in Eastern and Southern Africa
IWMI - International Water Management Insitute

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FOREWORD

The topic of groundwater management in basin organizations is not completely new, and it has been discussed at international events such as the Africa Water Week, the Stockholm World Water Week and other similar meetings. The process that led to the production of this training manual was the first time that African transboundary basin organizations were directly involved in a "Groundwater Management Needs Assessment Survey" and in the subsequent development of training materials for transboundary groundwater management. Many international organizations such as AGW-Net, BGR, IGRAC, UNDP-Cap-Net, IWMI, and the former GW-MATE team of the World Bank supported this process and have provided valuable inputs to this manual.

Transboundary water management is of great importance to Africa as has been emphasized in the African Water Vision 2025; almost all Sub-Saharan African countries share at least one international river basin. In Africa there are about eighty transboundary lake and river basins and at least forty transboundary aquifer basins. The African Water Vision 2025 stresses that groundwater is the major, and often only, source of drinking water for more than 75 % of the African population. Groundwater constitutes over 95% of the fresh water resources in Africa, and pollution and salinization of this resource is often irreversible on human timescale. As a result, a broad consensus has developed in AMCOW and in ANBO/INBO, (African (International) Network of Basin Organizations), that groundwater must be included in integrated river basin management.

Although worldwide much progress has been made in river basin management, transboundary groundwater management has often been neglected. Among the many reasons for this, the most important is that the groundwater resource is highly complex and has not been quantified across Africa. Most African basin organizations lack the technical skills and capacity to assess and manage transboundary groundwater resources. This renders the groundwater resource largely "invisible" to the water managers who are required to manage it sustainably.

Given the huge importance of the groundwater resource to Africa, and especially in light of the growing impacts of climate change, it is imperative that wise management of groundwater at every scale begins without any further delay. There are already some promising precedents in Africa that can provide helpful examples and experiences that other African basin organizations can draw on.

The recent 2012 AMCOW status report on “Water Resources Management in Africa” states that groundwater management systems are working satisfactorily in most North African countries, whereas in Central and West Africa, groundwater management systems are less common. The needs assessment survey shows that groundwater governance mechanisms are prioritized in the more arid parts of the continent, where the local population is highly dependent on groundwater as their primary drinking water source. In regions where people depend on groundwater, management systems are implemented.

“Conceptualizing Cooperation for Africa’s Transboundary Aquifers Systems” (German Development Institute - DIE) sums it up by saying: “Africa’s transboundary aquifer basins contain huge volumes of water which are vital for the future’s economic development and social well-being of the riparian countries. Fortunately, negative transboundary effects of national use have been very rare to date. This will almost definitely change if the potential for Africa’s groundwater resources is exploited, and this with international support. Then, cooperation between African nations will become almost imperative in order to prevent the “race to the pump-house”. That’s why we have to act now!

We wish the students and trainers to be inspired by this manual and to disseminate it to all stakeholders in regional basin organizations, national and local governments, civil society and businesses.

Tamiru Abiye (African Groundwater Network, Manager)
Vanessa Vaessen (Policy Advice on Groundwater, Project Management, BGR)

PREFACE

This training manual is the product of two specific policy visions.

The first is derived from one of the pillars of Integrated Water Resources Management (IWRM): that all water should be managed as a unitary resource within hydrological basin boundaries.

The second relates to the obvious transboundary nature of water as rivers flow from one country to the next. International development cooperation in the water sector is therefore increasingly supporting transboundary cooperation mechanisms.

Although groundwater has not been excluded from these policy visions, its integration into river basin management organizations and appreciation of the transboundary nature of groundwater flows have lagged behind. This is a product of both the complexity of the groundwater resource and its 'invisibility' to the public eye.

As a result, many African multi-state basin organizations do not even have a mandate to manage transboundary groundwater or coordinate its management between the basin states. Even where such a mandate does exist, many of these basin organizations have limited capacity to do so.

As a result of these conditions, BGR / AGW-Net / IWMI carried out a 'needs assessment for transboundary groundwater management' in nine international river basin organizations in Africa[1]. This survey revealed the varying needs in the different basin organizations for effective transboundary groundwater management.

This training manual has been complied in response to the needs expressed and is designed to help develop capacity within the basin organizations to manage their transboundary groundwater issues.

The topics covered range from policy and legislation, through bio-physical resource issues to communication and stakeholder relations. Much of the material in this manual is also relevant for internal national basin organizations.

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Africa Groundwater Network.

[1] ORASECOM, LIMCOM, OKACOM, OMVS, VBA, LCBC, NSAS, NBI, NBA.

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The teacher and the taught together create the teaching.

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